



UC081.001A

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gatti, et al.  
Appl. No. : 10/042,775  
Filed : January 8, 2002  
For : **EXPRESSION AND  
PURIFICATION OF ATM  
PROTEIN USING  
VACCINIA VIRUS**  
Group Art Unit: 1636  
Examiner : Marvich, Maria  
Docket No. : UC081.001A  
Customer No. : 20,995

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on

December 22, 2004

(Date)

Erik T. Anderson, Reg. No. 52,559

**DECLARATION OF HELEN CHUN, Ph.D. UNDER 37 C.F.R. § 1.132**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

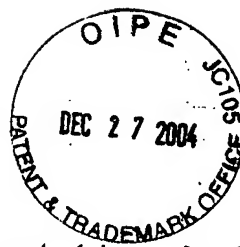
Dear Sir:

I, Helen Chun, Ph.D., declare and state that:

1. I am a co-inventor of the invention described in U.S. Patent Application Serial No. 10/042,775 entitled EXPRESSION AND PURIFICATION OF ATM PROTEIN USING VACCINIA VIRUS.
2. I received my Ph.D. in Molecular Biology from the University of California, Los Angeles in 2002. I am presently employed by the California State University, Dominguez Hills in the Biology Department as an Assistant Professor. I am engaged in full-time research on the molecular basis for the disease ataxia-telangiectasia, and have experience in viral transfection for expression of the ATM protein.


**BEST AVAILABLE COPY**

Appl. No. : 10/042,775  
Filed : January 8, 2002



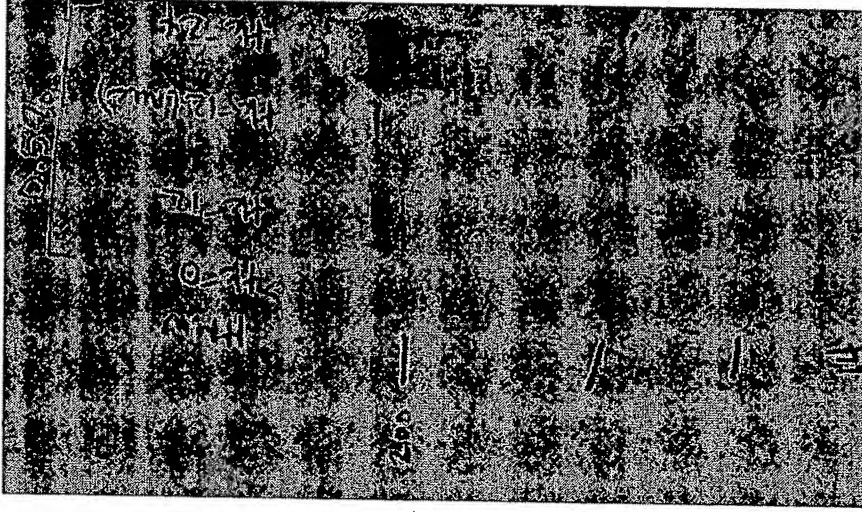
3. I am familiar with the specification and claims of U.S. Patent Application Serial No. 10/042,775.
4. The detailed description presented in the above-referenced patent application reflects my work expressing ATM protein in mammalian cells using vaccinia virus as a vector.
5. I have performed ATM protein expression experiments using vaccinia virus on several different types of mammalian cells. Specifically, I have successfully transfected HeLa cells, L3 cells, and CV-1 cells.
6. Attached hereto as Exhibit A is true and accurate copy of a Western blot showing the results of an experiment I performed using vaccinia virus transfection in CV-1 cells. As shown, I measured the level of ATM protein from transfected CV-1 cells at 12 hours ("tk-12"), 24 hours ("tk-24"), 36 hours ("tk-36"), and 48 hours ("tk-48"). ATM protein expression is shown in all lanes of this Western blot.
7. Attached hereto as Exhibits B and C are true and correct copies of Figures 1 and 2 from the present patent specification. Figure 1, upper panel, shows ATM protein expression in L3 cells infected with ATM-expressing vaccinia virus. In Figure 2, lane 1 ("Lysate") shows ATM protein expression in HeLa cells infected with ATM-expressing vaccinia virus.
8. Based on visual inspection, it is my opinion that Exhibits A, B, and C show comparable levels of ATM protein expression in each of the three cell lines, CV-1, L3, and HeLa.
9. Based on my experience and knowledge, I understand that vaccinia virus can be used to transfect nearly all types of mammalian cells. Because vaccinia virus was found to be a useful vector for ATM protein expression in HeLa cells, L3 cells, and CV-1 cells, I believe that vaccinia virus would work in a similar manner with respect to ATM protein expression in nearly all other types of mammalian host cells.
10. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 12/22/04

  
Helen Chun, Ph.D.

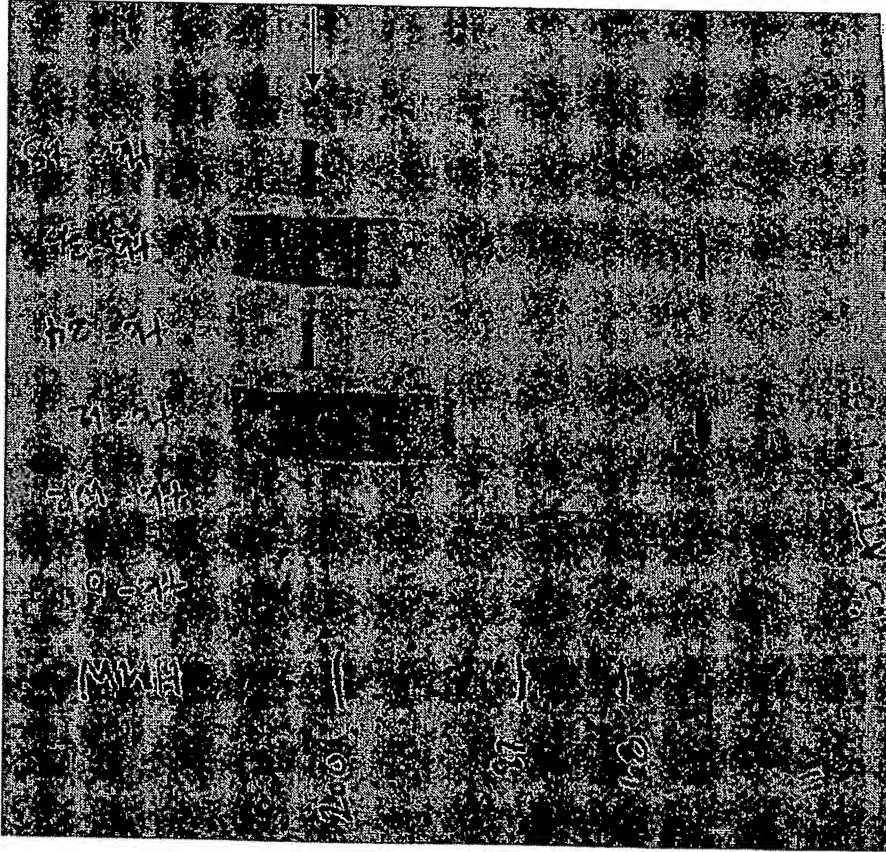


FLAG-  
ATM



cv-1 tk- cells infected with  
vWR-ATM vaccinia virus  
Anti-FLAG for detection  
0 - 24 hours

FLAG-  
ATM



cv-1 tk- cells infected with vWR-ATM  
vaccinia virus  
Anti-ATM antibody for detection  
0 - 48 hours

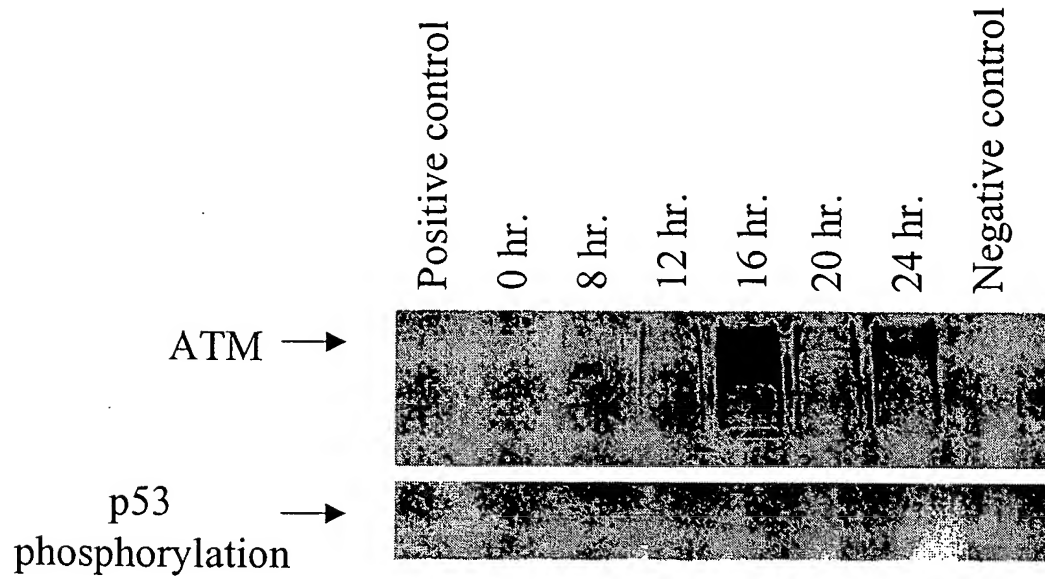


Fig. 1

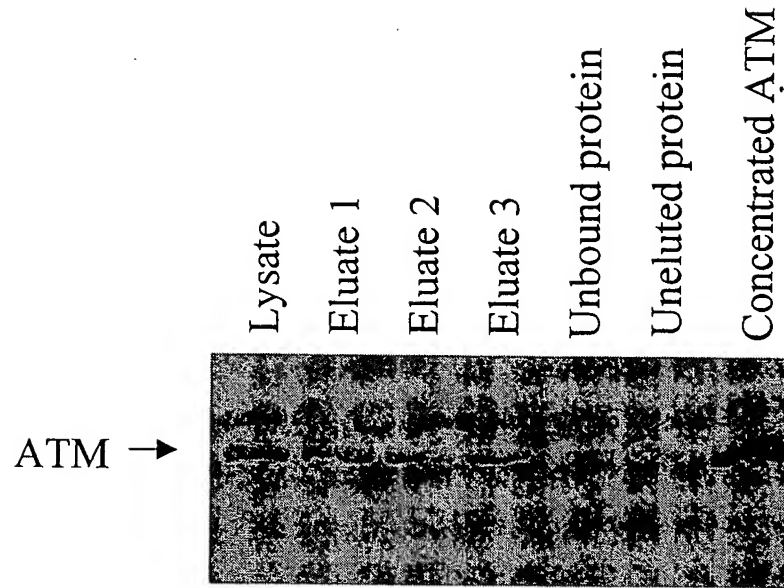


Fig. 2

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☒ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**